

A NEW SPECIES OF *MATELEA* (APOCYNACEAE:
ASCLEPIADOIDEAE) FROM HISPANIOLA

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ABSTRACT

A new species of *Matelea* is described from Hispaniola, resulting from study of subtribe Gonolobinae (Apocynaceae: Asclepiadoideae) in the West Indies.

RESUMEN

Se describe una especie nueva de *Matelea* de la Española como resultado del estudio de la subtribu Gonolobinae (Apocynaceae: Asclepiadoideae) en las Indias Occidentales.

In the course of on-going systematic study of subtribe Gonolobinae (Apocynaceae: Asclepiadoideae) in the West Indies, a new species of *Matelea* Aubl. was discovered from Hispaniola:

Matelea pentactina Krings, sp. nov. (Fig. 1, A–B, E). TYPE: HAITI: Les Roseaux, Massif de la Hotte western group, rocky ledge, ca. 1300 m, 16 Sep 1928, Ekman H 10685 (HOLOTYPE: S).

Species nova distinguibili a *Matelea tamnifolia* (Griseb.) Woodson folio basi rotundata, non cordata vel auriculata, a *Matelea constanzana* Jiménez corolla viridis vel flava, lobis utrinque reticulato-venosis, superne puberulis, et a *Matelea ovatifolia* (Griseb.) Woodson corolla trichomata 0.11 mm longa, corona segmentis erectis ovatis, (1.5–)1.7–1.9 mm, via antheram 0.5–0.6 mm.

Twining vine; stems herbaceous when young, becoming woody with age, the bark cream-colored, somewhat corky; stems pubescent in lines, the trichomes white, multi-cellular, retrorsely curved or sometimes straight, to 0.2 mm long; leaves opposite, simple, the blades ovate to elliptic, (6.5–)12.7–21 mm × (2.6–)6.8–13.6 mm, both surfaces glabrous or glabrate, the apices obtuse to narrowly rounded, apiculate, the apiculum to 1.2 mm long, the bases rounded the margins entire, glabrous or ciliolate, the cilia ca. 0.08 mm long, colleters 2, yellow to orange, borne adaxially on the midvein at the base of the blade, to 0.2 mm long, petioles 2.9–9.4 mm long, grooved adaxially, glabrous except for the groove, trichomes mostly antrorse, to 0.18 mm long; inflorescence axillary, umbelliform, the peduncles severely reduced to obsolete, pedicels 5–12 mm long, puberulous with trichomes to 0.12 mm long or glabrate; sepals 5, ovate to lanceolate, ca. 1 mm long, the apices rounded to obtuse, both surfaces glabrous, the margins glabrous or very sparsely ciliolate; corolla rotate, pale green or yellow with dark green reticulations, 5-lobed, the lobes ovate, to 4.2 mm long, the adaxial surface

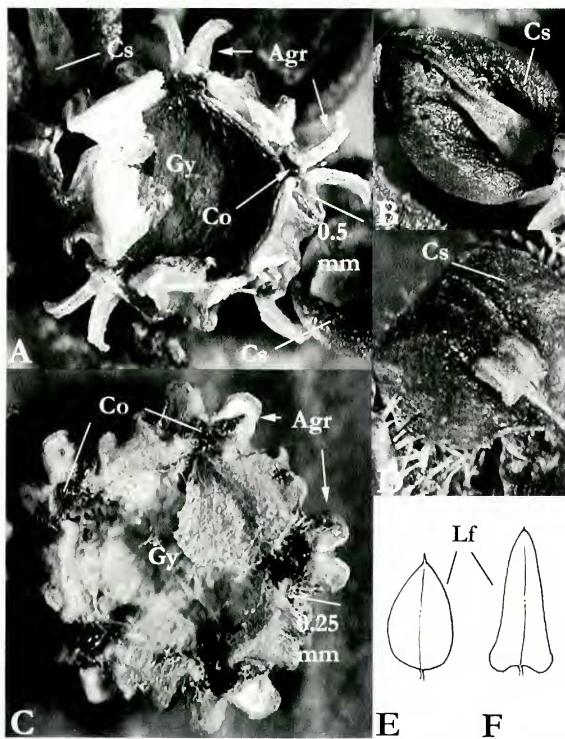


FIG. 1. *Matelea* subgenus *Poicilla*: A–B & E, *Matelea pentactina* Krings (Ekman H 10685, S); C–E, *Matelea ovatifolia* (Griseb.) Woodson (Wright 2965, GH); F, *Matelea tannifolia* (Griseb.) Woodson (Wright s.n., GH). Agr = Anther guide rail; Co = Corpusculum; Cs = erect staminal corona segment; Gy = Gynostegium; Lf = leaf.

pubescent near the base of the lobes, the trichomes whitish to 0.11 mm long, the abaxial surface glabrous; faucal annulus [Ca] pubescent; corona of fused staminal and interstaminal parts [C(is)], glabrous, the staminal segments [Cs] erect, foliate, ovate (1.5–)1.7–1.9 mm long, the apices obtuse, deeply notched, higher than the apex of the gynostegium; gynostegium stipitate, the stipe ca. 0.2 mm long; dorsal anther appendages [Cd] lacking; anther guide rails outwardly pronounced, 0.5–0.6 mm long; pollinaria descending; follicles unknown.

Etymology.—The epithet *pentactina* refers to the five, elongate, outwardly projecting anther guide rails, reminiscent of rays.

Additional specimens examined: **Haiti**: Massif de la Selle, gr. Crête-a-Piquants, Port-au-Prince, between Carrefour-Martin and Bois d'Orme, c. 800 m, limestone, 17 Dec 1926, Ekman H 7402 (SI).

Matelea pentactina is most closely related to *Matelea ovatifolia* (Griseb.) Woodson (Fig. 1, C–E) and both its holotype and paratype have previously been referred to the latter (see Liogier 1981). Vegetatively the two species are exceedingly similar and may not be conclusively distinguished. However, a number of floral character states distinctly separate them (see Table 1 and key below). *Matelea ovatifolia* appears endemic to Cuba and *M. pentactina* to Hispaniola, although the single specimen seen from the Dominican Republic (Fuertes 991, GH) is sterile and thus cannot be conclusively referred to either based on morphology. A handwritten note with the holotype of *M. pentactina*, presumably by Ekman, indicates it was “seen occasionally throughout southern Haiti (at least), although seldom with flrs!” A similar note on the paratype reads: “Rare, although I think I have seen it sterile before and taken it for some *Metastelma* [sic].” *Matelea pentactina* also appears closely related to the Hispaniolan *Matelea constanzana* Jiménez (nom. nov. for *Poicillopsis tuerckheimii* Schltr. as the epithet is not available in *Matelea*). This latter species was apparently known only from the type (Sto. Domingo prope Constanza, *Tuerckheim* 3466, Jul 1910; see also Liogier 1981) and appears to no longer be extant. The protologue indicated that *M. constanzana* also bears obtuse staminal corona segments, but exhibits glabrous white flowers. The striking reticulations evident in the pubescent, green or yellow-flowered *M. pentactina* were not described for *M. constanzana*.

According to the subgeneric classification erected by Woodson (1941), *Matelea pentactina* and *M. ovatifolia*, as well as *M. tamnifolia* (Griseb.) Woodson (endemic to Cuba; Fig. 1, F), belong to the entirely Antillean subgenus *Poicilla*. Woodson (1941) did not include the entity now known as *M. constanzana* in his treatment, but its affinities would seem to place it in his subg. *Poicilla* as well. Although many of Woodson's (1941) subgenera are likely ill-conceived (Stevens 1988), subgenus *Poicilla* is maintained here in the absence of a rigorous test of Woodson's (1941) concept. A key to the subgenus is provided below. On-going systematic study of West Indian Gonolobinae aims to improve generic and subgeneric circumscriptions.

TABLE 1. Floral morphological characters distinguishing *Matelea pentactina* from the related *M. ovatifolia* (Apocynaceae: Asclepiadoideae).

Character	<i>Matelea pentactina</i>	<i>Matelea ovatifolia</i>
Adaxial corolla surface trichomes	to 0.11 mm long	0.13–0.20 mm long
Erect staminal corona segments [C(s)]	(1.5–)1.7–1.9 mm long, ovate, the apices obtuse	0.99–1.28 mm long, obovate to suborbicu- lar, the apices rounded to emarginated
Anther guide rails	0.5–0.6 mm long	to 0.26 mm long

KEY TO MATELEA SUBGENUS POICILLA

1. Leaf blades lanceolate, the bases cordate to auriculate _____ **Matelea tamnifolia**
1. Leaf blades ovate, the bases rounded to truncate (very rarely shallowly cordate).
 2. Vine exhibiting the combination of corolla lobes white, glabrous on both sur-
faces, not reticulate, and staminal corona segments rhombic, obtuse _____ **Matelea
constanzana**
 2. Vine not exhibiting the above combination of characters (i.e., if corolla lobes
white, then corona segments obovate to suborbicular, the apices rounded to
emarginate OR if corona segments obtuse, then corollas green to yellow,
reticulate)
 3. Adaxial corolla pubescence 0.13–0.2 mm long; erect staminal corona seg-
ments 0.99–1.28 mm long, obovate to suborbicular, the apices rounded to
emarginate; anther guide rails to 0.26 mm long _____ **Matelea ovatifolia**
 3. Adaxial corolla pubescence to 0.11 mm long; erect staminal corona segments
(1.5–)1.7–1.9 mm long, ovate, the apices obtuse; anther guide rails 0.5–0.6 mm
long _____ **Matelea pentactina**

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